

-5-

WHAT IS CLAIMED IS:

1. Apparatus for feeding granular material, comprising:
a hopper having an upper inlet and a lower outlet, the outlet defining a
5 substantially vertical center axis, and

a flow controller/enhancer disposed in the hopper adjacent the outlet, the
flow controller/enhancer including a deflector element disposed in the hopper above
the outlet, the deflector element being of generally conical shape with an apex
10 thereof directed upwardly in substantial alignment with the vertical center axis, an
outer peripheral edge of the deflector element spaced inwardly from an inner surface
of the hopper to define a space therebetween where gravitating granular material,
including granular material deflected outwardly by the deflector element, flows
downwardly past the deflector element toward the outlet.
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2. The apparatus according to claim 1 wherein the flow
controller/enhancer further comprises a support structure extending upwardly within
the hopper, the deflector element being carried at an upper end of the support
structure.
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3. The apparatus according to claim 2 wherein the flow
controller/enhancer further comprises a mounting portion connected to the hopper
and to which a lower portion of the support structure is fixed.
- 25 4. The apparatus according to claim 3 wherein the hopper includes a
frusto-conical portion having a cross section narrowing toward the outlet.
5. The apparatus according to claim 4 wherein the apex of the deflector
element extends to an elevation within the hopper no greater than about 25% of a
30 height of the frusto- conical section.

-6-

6. The apparatus according to claim 5 wherein the support structure comprises a plurality of upwardly projecting legs spaced circumferentially around the mounting portion.

5 7. The apparatus according to claim 6 wherein a lower end of the hopper includes a cylindrical portion defining the outlet, the mounting portion comprising a circular ring disposed in contact with an inner surface of the cylindrical portion.

10 8. The apparatus according to claim 7 wherein each leg includes a lower portion inclined upwardly and outwardly from the ring, and an upper portion inclined upwardly and inwardly toward the deflector element.

15 9. The apparatus according to claim 8 wherein the lower portions of the legs are inclined at the same angle as an inner surface of the frusto-conical portion of the hopper and bear against such inner surface.

20 10. The apparatus according to claim 7 wherein the ring is removably secured by a friction fit against the inner surface of the cylindrical portion of the hopper.

11. The apparatus according to claim 10 wherein the deflector element includes an upwardly facing solid conical surface.

25 12. The apparatus according to claim 1 wherein the support structure comprises a plurality of upwardly projecting legs spaced circumferentially around the mounting portion.

-7-

13. The apparatus according to claim 12 wherein a lower end of the hopper includes a cylindrical portion defining the outlet, the mounting portion comprising a circular ring disposed in contact with an inner surface of the cylindrical portion.

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14. The apparatus according to claim 13 wherein each leg includes a lower portion inclined upwardly and outwardly from the ring, and an upper portion inclined upwardly and inwardly toward the deflector element.

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15. The apparatus according to claim 1 wherein the flow controller/enhancer is removably secured to the hopper.

16. The apparatus according to claim 15 wherein the flow controller/enhancer is removably secured by a friction fit against the inner surface of the hopper.

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17. The apparatus according to claim 1 wherein the deflector includes an upwardly facing solid conical surface.

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18. An apparatus for making tablets from powder comprising:

a hopper having an upper powder inlet and a lower powder outlet, the outlet defining a substantially vertical center axis;

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a powder flow controller/enhancer disposed in the hopper adjacent the outlet and including a mounting portion connected to the hopper, a support structure projecting upwardly into the hopper from the mounting portion, and a deflector element disposed at an upper end of the support element and being of generally conical shape with an apex thereof directed upwardly and substantially aligned with the vertical center axis for deflecting gravitating powder outwardly prior to reaching the outlet; and

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-8-

a feed frame disposed beneath the outlet and being movable across the outlet, for receiving powder from the outlet as the feed frame moves across the outlet.